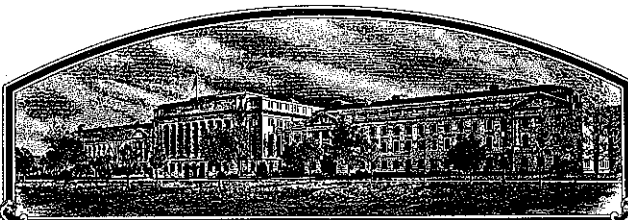


No.

9400177



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Pennsylvania Agricultural Experiment Station
Pennsylvania State University*
Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOFT RED WINTER WHEAT

'Pennmore'

*In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington, D.C.
this 30th day of April in
the year of our Lord one thousand nine
hundred and ninety-six.*

Attest:

Wm. A. Hunter
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Samuel J. Hittman
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Pennsylvania Agricultural Experiment Station Pennsylvania State University		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. PA8457-1	3. VARIETY NAME Pennmore
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) Rm. 229 Agricultural Administration Bldg University Park, PA 16802		5. PHONE (Include area code) 814-865-5410	FOR OFFICIAL USE ONLY PVPO NUMBER <div style="font-size: 2em; text-align: center;">9400177</div> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">FILING</div> <div> Date <div style="font-size: 1.5em;">May 18, 1994</div> Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">FEES</div> <div> Filing and Examination Fee: <div style="font-size: 1.5em;">\$ 2,325.00</div> Date <div style="font-size: 1.5em;">May 16, 1994</div> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RECEIVED</div> <div> Certificate Fee: <div style="font-size: 1.5em;">\$ 275.00</div> Date <div style="font-size: 1.5em;">2-12-96</div> </div> </div>
6. GENUS AND SPECIES NAME Triticum aestivum L.	7. FAMILY NAME (Botanical) Gramineae		
8. CROP KIND NAME (Common Name) Soft red winter wheat	9. DATE OF DETERMINATION March 2, 1992		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Land-Grant University		11. IF INCORPORATED, GIVE STATE OF INCORPORATION	
		12. DATE OF INCORPORATION	

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
C. R. Krueger, Assoc. Dean Research
Rm. 229 Agricultural Administration Bldg
University Park, PA 16802

PHONE (Include area code): (814) 865-5410

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a. ☒ Exhibit A, Origin and Breeding History of the Variety.
- b. ☒ Exhibit B, Novelty Statement.
- c. ☒ Exhibit C, Objective Description of Variety.
- d. ☐ Exhibit D, Additional Description of Variety.
- e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
- f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____.
- g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)
☒ YES (If "YES," answer items 16 and 17 below) ☐ NO (If "NO," skip to item 18 below)


16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____.)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.
 The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.
 Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE Associate Dean for Research	DATE 5/13/94
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE 1

9400177

Exhibit A

Origin and Breeding History of Pennmore Soft Red Winter Wheat

Pedigree: Abe/3/Doublecrop//Abe/VA68-24-42

The bulk breeding method was used to develop Pennmore soft red winter wheat. The initial selection was made in the F5 generation. Pennmore was derived from row 8156-1178 in the 1981 Headrow Nursery at the Pennsylvania State University. Selection criteria were high grain yield, high bushel weight, disease resistance (specifically powdery mildew and leaf rust) and high grain quality. Although the initial selection was resistant to powdery mildew, the races present in Pennsylvania changed and Pennmore was rated as moderately susceptible at time of release. Pennmore is still moderately resistant to leaf rust.

- | | |
|-----------|---|
| 1982-1984 | Seeds from row 8156-1178 were grown in bulk with slight reselection (F6-F8). About 200 typical heads were collected in 1984. |
| 1986 | One hundred twenty headrows were grown in Expt. 8667 and 70 were retained for advance (F9 generation). |
| 1988 | Progeny of the 70 selections retained in 1986 were grown in small plots (3' x 12'). Those with some taller variants were eliminated and 30 selections were retained for advance (F10 generation). |
| 1989 | Progeny of the 30 selections retained in 1988 were grown in small plots (3' x 48'). All selections were retained (F11 generation). |
| 1990 | Progeny of 30 selections retained in 1989 were grown in large plots (3' x 120'). All selections were retained (F12 generation). |
| 1991 | Breeder seed was produced from a bulk seed lot from the 1990 seed crop (F13 generation). |

Pennmore soft red winter wheat is uniform and stable within commercially acceptable limits. Occasional variants that are slightly taller appear but otherwise are typical of the variety. Frequency of variants is less than one half of one percent. Pennmore can be maintained and reproduced through seed without changing its characteristics.

Exhibit B**Novelty Statement**

Pennmore is a soft red winter wheat and spikes tend to be apically awnleted. It somewhat resembles the Tyler wheat variety in the field. Differences include, but are not necessarily restricted to, the following:

'Tyler' is most similar - AAA 5 Jan 1995, per letter

Pennmore compared to Tyler:

1. Heading date for Pennmore is 1 to 2 days later than that of Tyler.
2. Pennmore is more resistant to leaf rust (Table 3).
3. Pennmore has less scab (Table 3).
4. The phenol reaction of Pennmore is dark brown, whereas that of Tyler is light brown.
5. Pennmore has shorter awnlets on the spike (length of awns is 10 to 26 mm; awns of Tyler are 20 to 40 mm long).
6. Spikes of Pennmore are oblong, mid-dense, and awnleted; spikes of Tyler are fusiform to occasionally oblong, mid-dense, and awnleted.
7. Kernels of Pennmore have a short noncollared brush, whereas those of Tyler have a long, large brush.

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Exhibit-B

Table 1. Performance of Pennmore in Lancaster County, Pennsylvania, during 1987-1992.

GRAIN YIELD (bu/A)							
Variety	Year						Average
	1987	1988	1989	1990	1991	1992	
Pennmore	92	107	57	90	101	111	93.0
Tyler	75	91	52	80	84	101	80.5
LSD (.05)	8	11	10	9	10	12	
BUSHEL WEIGHT (lb/bu)							
Pennmore	57.2	58.9	51.3	56.7	55.7	57.7	56.3
Tyler	54.2	55.3	48.0	53.6	52.8	54.9	53.1
LSD (.05)	0.7	1.6	2.7	0.5	1.2	1.1	
PLANT HEIGHT (in)							
Pennmore	41	46	44	42	41	48	43.7
Tyler	40	44	43	43	40	47	42.8
LSD (.05)	2	3	2	1	2	2	
LODGING (%)							
Pennmore	0	14	29	0	0	28	11.8
Tyler	4	5	15	0	0	3	4.5
LSD (.05)	5	27	29	—	—	24	

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Exhibit-B

Table 2. Performance of Pennmore in Centre County, Pennsylvania, during 1987-1992.

GRAIN YIELD (bu/A)							
Variety	Year						Average
	1987	1988	1989	1990	1991	1992	
Pennmore	77	98	60	91	71	91	81.3
Tyler	92	109	59	91	66	95	85.3
LSD (.05)	7	10	5	9	7	10	
BUSHEL WEIGHT (lb/bu)							
Pennmore	58.7	60.9	52.3	58.5	60.6	61.2	58.7
Tyler	58.3	59.5	51.6	56.1	59.0	60.0	57.4
LSD (.05)	1.6	0.6	1.2	0.5	0.6	0.6	
PLANT HEIGHT (in)							
Pennmore	40	42	40	41	35	41	39.8
Tyler	40	43	41	42	37	41	40.7
LSD (.05)	2	2	1	2	2	1	
LODGING (%)							
Pennmore	0	0	5	0	0	0	1
Tyler	0	0	5	0	0	0	1
LSD (.05)	—	—	25	—	—	—	

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Exhibit-B

Table 3. Disease reaction of Pennmore observed in the field in Centre and Lancaster Counties.
Data are for years in which significant disease levels were present for recording.

LEAF RUST				
Variety	Centre County		Lancaster County	
	1990	1991	1988	1994
	-----%-----		-----%-----	
Pennmore	0	0.4	1	2
Tyler	15	10.9	56	45
LSD (.05)	1	1.2	12	6

POWDERY MILDEW (Centre County)				
	1988	1989	1990	1992
	-----%-----			
Pennmore	2.8	7	9	9
Tyler	4.6	11	13	10
LSD (.05)	1.8	3	2	4

SCAB (Centre County)	
	1989 (%)
Pennmore	0.8
Tyler	3.5
LSD (.05)	2.5

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT: Pennsylvania Agric. Exnt. Station Pennsylvania State University	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Rm. 229 Agricultural Administration Bldg. University Park, PA 16802	PVPO NUMBER 9400177
	VARIETY NAME OR TEMPORARY DESIGNATION Pennmore

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., 0 8 9 or 0 9) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 3 = OTHER (Specify)
2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

FIRST FLOWERING LAST FLOWERING

4. MATURITY (50% Flowering):

0 2 NO. OF DAYS EARLIER THAN 2 1 = TYLER 2 = SCOUT 3 = CHRIS
0 0 NO. OF DAYS LATER THAN 1 4 = LEMHI 5 = HUGAINE 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

1 0 7 CM. HIGH
0 0 CM. TALLER THAN 1 1 = TYLER 2 = SCOUT 3 = CHRIS
1 0 CM. SHORTER THAN 3 4 = LEMHI 5 = HUGAINE 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHOR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Vaxy bloom: 1 = ABSENT 2 = PRESENT

2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

1 Internodes: 1 = HOLLOW 2 = SOLID

0 3 NO. OF NODES (Originating from node above ground)

2 0 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT

1 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

2 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify):

1 Flag leaf: 1 = NOT TWISTED 2 = TWISTED

1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

2 Vaxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

1 2 MM. LEAF WIDTH (First leaf below flag leaf)

1 9 CM. LEAF LENGTH (First leaf below flag leaf)

AAA 20 Apr 1995
per letter

11. HEAD:

☐ 2 Density: 1 = LAX 2 = DENSE☐ 4 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) Oblong☐ 2 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED☐ 1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify):☐ 1 ☐ 4 CM. LENGTH☐ 0 ☐ 8 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 3 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.)☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)☐ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
4 = SQUARE 5 = ELEVATED 6 = APICULATE☐ 1 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL☐ 1 Check: 1 = ROUNDED 2 = ANGULAR☐ 1 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED☐ 4 Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN
4 = BROWN 5 = BLACK☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify)☐ 0 ☐ 4 MM. LENGTH ☐ 0 ☐ 7 MM. WIDTH☐ 3 ☐ 5 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'☐ Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 2 STEM RUST (Races)☐ 2 LEAF RUST (Races)☐ 0 STRIPE RUST (Races)☐ 0 LOOSE SMUT☐ 1 POWDERY MILDEW☐ 0 BUNT☐ OTHER (Specify)

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY☐ 0 APHID (Bydv.)☐ 0 GREEN BUG☐ 0 CEREAL LEAF BEETLE☐ OTHER (Specify)

HESSIAN FLY

RACES:

☐ 0 GP☐ 0 A☐ 0 B☐ 0 C☐ 0 D☐ 0 E☐ 0 F☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Tyler	Seed size	Titan
Leaf size	Tyler	Seed shape	Titan
Leaf color	Tyler	Coleoptile elongation	
Leaf carriage		Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

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ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY
1990 CROPDR. M.L. RISIUS
UNIVERSITY PARK, PA.
CENTRE CO. 1987

STD = #761, SCOTTY

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. KG/HL	SOFT. EQUIV.	FLOUR YIELD	FLOUR PROT.	MICRO AWRC	COOKIE TOP DIAM.	TOP GR.
****	STANDARD	100.0 A	100.0 A	100.0 A	79.2	47.9	76.5	9.61	52.7	17.7	5
****	BENCHMARK	98.1 B	105.9 A	98.1 B	78.6	61.4	75.1 *	7.97	52.9	18.2	7
730 2751-1	SALUDA	95.3 B	97.9 B	95.9 B	81.1	57.3	75.1 *	8.93	56.0	17.9	2
761 3751-3	SCOTTY	100.0 A	100.0 A	100.0 A	79.2	47.9	76.5	9.61	52.7	17.7	5
762 3751-4	REDCOAT	97.4 B	88.2 D	88.2 D	81.3	50.2	74.9 *	10.18	53.3	17.2	3
763 3751-13	TYLER	97.6 B	92.0 C	92.0 C	79.2 *	56.0	76.0	7.63	55.4 *	17.6	4
764 3751-15	PA8457-1	100.0 A	98.3 B	98.3 B	80.7	53.5	76.3	8.68	55.3 *	17.9	5
765 3751-19	PA8457-9	94.3 C	100.0 A	94.3 C	76.3 D	57.6	74.5 *	8.99	54.8 *	17.9	4

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ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY
1990 CROPDR. W.L. RISIUS
UNIVERSITY PARK, PA.
LANCASTER CO. 1997

STD = #767, SCOTTY

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. KG/HL	SOFT. EQUIV.	FLOUR YIELD	FLOUR PROT.	MICRO AWRC	COOKIE TOP DIAM. GR.
****	STANDARD	100.0 A	100.0 A	100.0 A	74.3	50.3	76.3	11.22	52.3	17.5 3
****	BENCHMARK	100.9 A	105.3 A	100.8 A	78.6	61.4	75.1 *	7.87	52.9	18.2 7
756 8761-1	SALUDA	96.3 B	77.9 F	77.9 F	75.0	61.9	75.3	9.95	59.1 @	17.3 * 2
767 8761-3	SCOTTY	100.0 A	100.0 A	100.0 A	74.3	50.3	76.3	11.22	52.3	17.5 3
768 8761-4	RECCOAT	98.7 B	87.4 D	87.4 D	73.0	55.5	75.6	10.59	52.7	16.9 @ 4
769 8761-15	PA8457-1	98.4 B	96.8 B	96.8 B	76.9	55.9	75.4	10.40	53.5	17.4 3
770 8761-19	PA8457-9	92.7 C	100.5 A	92.7 C	72.2 @	60.0	74.7 *	10.41	54.3 *	17.8 2

ADVANCED NURSERY EVALUATION

9400177

FOR SOFT WHEAT MILLING AND BAKING QUALITY
1990 CROPDR. M.L. RISIUS
UNIVERSITY PARK, PA.
CENTRE CO. 16801

STD = #744, SCOTTY

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. KG/HL	SOFT. EQUIV.	FLOUR YIELD	FLOUR PROT.	MICRO AWRC	COOKIE TOP DIAH.	GR.
****	STANDARD	100.0 A	100.0 A	100.0 A	80.6	42.3	75.2	9.42	54.1	17.5	5
****	BENCHMARK	102.1 A	110.0 A	102.1 A	78.6 D	61.4	75.1	7.97	52.9	18.2	7
742 8851-1	SALUDA	95.4 B	89.5 D	89.5 D	83.3	51.8	73.9 *	9.01	59.9 D	17.6	3
743 8851-2	FILLMORE	105.7 A	100.3 A	100.3 A	81.7	49.8	76.7	8.33	55.9 *	17.6	5
744 8851-3	SCOTTY	100.0 A	100.0 A	100.0 A	80.6	42.3	75.2	9.42	54.1	17.5	5
745 8851-4	REDCOAT	93.5 B	89.0 D	89.0 D	82.2	46.0	74.5	10.30 *	55.2	17 *	4
746 8851-5	TITAN	94.3 C	99.2 B	94.3 C	80.2	50.9	73.7 *	8.80	54.7	17.4	3
747 8851-13	TYLER	103.7 A	100.3 A	100.6 A	80.3	49.9	75.3	8.06	56.4 *	17.6	5
748 8851-15	PA8457-1	103.6 A	101.9 A	101.9 A	82.9	48.0	74.9	8.89	56.2 *	17.8	5
749 8851-17	PA8766-3	97.2 B	108.0 A	97.2 B	82.0	48.2	73.3 *	9.23	53.9	18	5
750 8851-18	PA8766-4	105.1 A	110.0 A	105.1 A	81.9	48.5	75.4	8.59	53.1	17.7	5

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ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY
1990 CROP

DR. M.L. RISIUS
UNIVERSITY PARK, PA.
LANCASTER CO. 1983

STD = #753, SCOTTY

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. KG/HL	SOFT. EQUIV.	FLOUR YIELD	FLOUR PROT.	MICRO AWRC	COOKIE TOP DIAM. GR.
***	STANDARD	100.0 A	100.0 A	100.0 A	78.5	47.5	76.5	9.32	53.3	18 5
***	BENCHMARK	98.7 B	107.3 A	98.7 B	78.6	61.4	75.1 *	7.37	52.9	13.2 7
751 8861-1	SALUDA	97.8 B	78.1 F	78.1 F	82.0	55.2	75.4	8.91	56.3 Q	17.3 G 2
752 8861-2	FILLMORE	99.4 B	90.7 C	90.7 C	79.3	53.5	76.2	9.28	54	17.6 * 6
753 8861-3	SCOTTY	100.0 A	100.0 A	100.0 A	78.5	47.5	76.5	9.32	53.3	18 5
754 8861-4	REDCOAT	102.7 A	74.5 F	74.5 F	80.3	50.3	76.0	10.51 *	54.5	17 Q 2
755 8861-5	TITAN	91.1 C	72.4 F	72.4 F	78.2	54.2	74.1 Q	9.34	54.6	16.9 Q 3
756 8861-13	TYLER	100.8 A	81.2 E	81.2 E	77.1 *	55.4	76.0	8.63	53.9	17.2 Q 5
757 8861-15	PA8457-1	97.6 B	75.0 F	75.0 F	80.2	48.8	75.2 *	11.35 Q	55.4 *	17.1 Q 3
758 8861-17	PA8766-3	97.3 B	87.6 D	87.6 D	80.2	51.1	74.5 *	9.24	53.1	17.4 Q 4
759 8861-18	PA8766-4	100.2 A	103.3 A	100.2 A	78.4	54.8	75.6	8.48	52.4	18 4

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EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITIES
1992 CROP

DR. M.L. RISIUS
UNIVERSITY PARK, PA.
STATE WHEAT VARIETY TRIAL (CENTRE CO.) 9151

STANDARD = #4114, TYLER

SAMPLE NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	ADJ. YIELD	PROTEIN %	AWRC %	SOFTNESS EQUIV.
*	STANDARD	100.0 A	100.0 A	100.0 A	74.82	7.70	55.2	49.51
*	BENCHMARK	97.6 B	99.7 B	97.6 B	74.07	8.50 *	52.0	57.74
4101	1 SALUDA	98.4 B	103.9 A	98.4 B	74.32	7.69	56.5	50.82
4102	2 FILLMORE	99.7 B	99.2 B	99.2 B	74.72	8.67 *	55.5	48.52
4103	3 SCOTTY	100.6 A	90.6 C	90.6 C	75.01	8.97 *	53.4	44.72 *
4104	4 REDCOAT	98.1 B	101.8 A	98.1 B	74.25	9.30 Q	55.6	50.36
4105	5 FL 302	100.3 A	103.5 A	100.3 A	74.92	8.40	55.0	52.31
4106	6 SUSQUEHANNA	97.6 B	103.4 A	97.6 B	74.08	9.22 Q	55.6	51.52
4107	7 2555	101.1 A	104.7 A	101.1 A	75.18	7.43	55.0	55.83
4108	8 2548	93.4 C	103.1 A	93.4 C	72.77 Q	7.88	58.7 *	48.14
4109	9 PA8457-1	98.6 B	104.8 A	98.6 B	74.39	8.34	58.2 *	49.41
4110	10 DYNASTY	100.6 A	105.2 A	100.6 A	75.00	8.21	55.3	56.07
4111	11 CLARK	96.1 B	105.9 A	96.1 B	73.61 *	8.64 *	56.1	52.81
4112	12 HOFFMAN BRAND 28	102.9 A	102.2 A	102.2 A	75.73	7.75	55.6	50.64
4113	13 HOFFMAN BRAND 45	101.9 A	99.2 B	99.2 B	75.41	8.55 *	57.5	46.14 *
4114	14 TYLER	100.0 A	100.0 A	100.0 A	74.82	7.70	55.2	49.51
4115	15 HOFFMAN BRAND 89	100.5 A	92.4 C	92.4 C	74.96	8.32	56.6	42.19 Q
4116	16 CHEROKEE	98.5 B	99.0 B	98.5 B	74.35	8.17	56.6	47.06
4117	17 MADISON	105.5 A	97.7 B	97.7 B	76.54	8.68 *	53.6	49.77
4118	18 WAKEFIELD	99.8 B	101.3 A	99.8 B	74.77	8.29	55.3	50.36
4119	19 ABI 85-5941	103.2 A	99.2 B	99.2 B	75.80	8.70 *	54.1	50.29
4120	20 ABI 85-81	99.9 B	103.2 A	99.9 B	74.78	7.91	56.6	50.14
4121	21 SR-82	94.9 B	96.4 B	94.9 B	73.25 *	7.94	57.3	44.29 *
4122	22 W-109	101.7 A	93.5 C	93.5 C	75.34	8.33	55.9	43.82 Q
4123	23 SR-87	97.4 B	100.6 A	97.4 B	74.02	8.78 *	55.1	50.07
4124	24 SR-202	106.3 A	101.9 A	101.9 A	76.76	8.81 *	55.2	50.91
4125	25 SR-203	100.3 A	100.8 A	100.3 A	74.90	7.33	55.0	50.32
4126	26 PA44	98.7 B	104.9 A	98.7 B	74.42	8.10	58.1 *	49.62
4127	27 PA32	103.2 A	99.6 B	99.6 B	75.81	8.33	54.7	49.84
4128	28 PA30	100.3 A	102.8 A	100.3 A	74.93	7.72	56.4	50.09
4129	29 PA29	97.7 B	104.0 A	97.7 B	74.10	8.80 *	56.1	51.35
4130	30 PA37	100.0 A	104.9 A	100.0 A	74.82	8.21	56.3	51.82

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EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITIES

1992 CROP

DR. M.L. RISIUS
UNIVERSITY PARK, PA.
STATE WHEAT VARIETY TRIAL (LANCASTER CO.) 9161

STANDARD = #4144, TYLER

SAMPLE NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	ADJ. YIELD	PROTEIN %	AWRC %	SOFTNESS EQUIV.
*	STANDARD	100.0 A	100.0 A	100.0 A	74.34	9.68	55.5	58.85
*	BENCHMARK	99.1 B	93.0 C	93.0 C	74.07	8.50	52.0	57.74
4131	1 SALUDA	97.6 B	91.6 C	91.6 C	73.61	9.70	53.7	54.10 *
4132	2 FILLMORE	101.3 A	96.1 B	96.1 B	74.74	10.94 *	55.5	55.46 *
4133	3 SCOTTY	104.5 A	87.1 D	87.1 D	75.73	11.35 *	52.0	52.55 *
4134	4 REDCOAT	99.0 B	91.3 C	91.3 C	74.03	11.50 *	55.1	51.79 q
4135	5 FL 302	103.0 A	94.6 C	94.6 C	75.26	11.24 *	52.4	58.56
4136	6 SUSQUEHANNA	99.5 B	96.2 B	96.2 B	74.17	11.74 q	55.2	55.91
4137	7 2555	101.1 A	100.6 A	100.6 A	74.66	10.65 *	53.4	62.41
4138	8 2548	95.8 B	97.4 B	95.8 B	73.03 *	9.70	55.8	56.10
4139	9 PA8457-1	100.0 A	96.6 B	96.6 B	74.34	9.95	56.2	54.89 *
4140	10 DYNASTY	103.7 A	102.4 A	102.4 A	75.48	10.02	55.1	61.56
4141	11 CLARK	93.6 C	98.8 B	93.6 C	72.38 q	10.91 *	54.4	59.42
4142	12 HOFFMAN BRAND 28	103.7 A	91.1 C	91.1 C	75.46	10.62	56.8	49.15 q
4143	13 HOFFMAN BRAND 45	100.8 A	91.1 C	91.1 C	74.59	11.19 *	56.3	49.90 q
4144	14 TYLER	100.0 A	100.0 A	100.0 A	74.34	9.68	55.5	58.85
4145	15 HOFFMAN BRAND 89	107.5 A	82.5 E	82.5 E	76.64	10.82 *	54.6	44.78 q
4146	16 CHEROKEE	98.0 B	85.8 D	85.8 D	73.71	11.60 q	52.7	50.37 q
4147	17 MADISON	103.5 A	92.5 C	92.5 C	75.42	11.04 *	51.4	58.18
4148	18 WAKEFIELD	99.9 A	95.3 B	95.3 B	74.31	11.00 *	54.5	56.20
4149	19 ABI 85-5941	100.1 A	92.9 C	92.9 C	74.38	11.15 *	53.4	55.67 *
4150	20 ABI 85-81	97.1 B	93.5 C	93.5 C	73.44 *	10.83 *	52.7	57.19
4151	21 SR-82	96.5 B	97.0 B	96.5 B	73.25 *	11.04 *	54.6	57.47
4152	22 W-109	103.0 A	81.6 E	81.6 E	75.26	11.53 *	54.2	44.53 q
4153	23 SR-87	102.0 A	100.2 A	100.2 A	74.96	11.07 *	54.2	60.93
4154	24 SR-202	104.6 A	91.7 C	91.7 C	75.74	10.79 *	53.1	55.04 *
4155	25 SR-203	100.6 A	94.8 C	94.8 C	74.52	9.94	53.1	57.70
4156	26 PA44	98.9 B	95.1 B	95.1 B	73.99	11.84 q	55.5	54.58 *
4157	27 PA32	104.8 A	92.6 C	92.6 C	75.81	10.36	51.8	57.64
4158	28 PA30	103.7 A	86.4 D	86.4 D	75.47	11.80 q	51.9	52.10 q
4159	29 PA29	97.8 B	95.4 B	95.4 B	73.65	11.65 q	55.5	54.83 *
4160	30 PA37	103.3 A	92.7 C	92.7 C	75.36	11.19 *	53.5	55.33 *

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EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITIES

1992 CROP

DR. M.L. RISIUS
UNIVERSITY PARK, PA.
CENTRE CO. STATE VARIETY TEST (9251)

STANDARD = #3730, DYNASTY

SAMPLE NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	ADJ. YIELD	PROTEIN %	AWRC %	SOFTNESS EQUIV.
*	STANDARD	100.0 A	100.0 A	100.0 A	74.59	9.43	57.2	51.53
*	BENCHMARK	98.3 B	110.0 A	98.3 B	74.07	8.50	52.0	57.74
3721 C-1	Saluda	101.1 A	98.7 B	98.7 B	74.94	8.92	58.6	52.27
3722 C-2	Fillmore	105.1 A	99.3 B	99.3 B	76.17	8.45	56.8	50.54
3723 C-3	Scotty	103.0 A	93.8 C	93.8 C	75.51	10.30	55.5	44.69 q
3724 C-4	Redcoat	94.8 C	95.6 B	94.8 C	72.99 *	9.33	58.8	50.10
3725 C-5	FL 302	103.1 A	105.1 A	103.1 A	75.55	9.60	55.1	52.87
3726 C-6	Susquehanna	100.3 A	99.8 B	99.8 B	74.70	9.47	57.1	51.22
3727 C-7	2545	94.1 C	98.5 B	94.1 C	72.76 q	8.60	56.3	49.25
3728 C-8	2548	95.8 B	93.1 C	93.1 C	73.30 *	8.43	61.5 *	51.48
3729 C-9	Pennmore	97.5 B	95.1 B	95.1 B	73.82	9.45	57.5	48.14 *
3730 C-10	Dynasty	100.0 A	100.0 A	100.0 A	74.59	9.43	57.2	51.53
3731 C-11	2510	105.2 A	95.6 B	95.6 B	76.19	7.95	58.6	49.84
3732 C-12	Hoffman Brand 28	106.3 A	90.5 C	90.5 C	76.52	8.70	58.4	45.66 q
3733 C-13	Hoffman Brand 45	102.1 A	88.7 D	88.7 D	75.25	9.13	59.5	45.66 q
3734 C-14	Tyler	97.9 B	98.1 B	97.9 B	73.95	8.99	56.5	49.22
3735 C-15	Hoffman Brand 89	104.4 A	85.6 D	85.6 D	75.95	9.70	57.3	40.59 q
3736 C-16	Freedom	95.5 B	95.7 B	95.5 B	73.20 *	9.27	57.2	48.19 *
3737 C-17	Madison	102.0 A	97.1 B	97.1 B	75.20	9.74	55.9	47.73 *
3738 C-18	Wakefield	100.1 A	101.8 A	100.1 A	74.61	9.44	55.3	50.62
3739 C-19	Excel	98.5 B	105.2 A	98.5 B	74.13	8.94	55.8	53.82
3740 C-20	PA8465-32	95.9 B	100.6 A	95.9 B	73.32 *	9.91	54.3	48.42 *
3741 C-21	SR 87	98.4 B	93.5 C	93.5 C	74.09	9.90	58.2	47.77 *
3742 C-22	W109	102.4 A	86.6 D	86.6 D	75.34	9.60	57.7	41.84 q
3743 C-23	Twain	96.2 B	94.9 C	94.9 C	73.43 *	9.21	57.1	47.48 *
3744 C-24	Lincoln	99.1 B	102.4 A	99.1 B	74.30	9.07	55.2	50.94
3745 C-25	Sawyer	98.4 B	100.6 A	98.4 B	74.10	9.45	54.8	49.10

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EARLY GENERATION SCREENING EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITIES

1992 CROP

DR. M.L. RISIUS
UNIVERSITY PARK, PA.
LANCASTER CO. STATE VARIETY TEST (9261)

STANDARD = #3755, DYNASTY

SAMPLE NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	ADJ. YIELD	PROTEIN %	AWRC %	SOFT-NESS EQUIV.
*	STANDARD	100.0 A	100.0 A	100.0 A	74.87	9.48	54.2	57.39
*	BENCHMARK	97.4 B	104.1 A	97.4 B	74.07 *	8.50	52.0	57.74
3746 L-26	Saluda	95.2 B	93.0 C	93.0 C	73.38 *	9.86	56.7 *	54.95
3747 L-27	Fillmore	104.7 A	91.6 C	91.6 C	76.32	10.16	55.4	51.95 *
3748 L-28	Scotty	101.0 A	90.9 C	90.9 C	75.18	10.77 *	52.8	47.55 q
3749 L-29	Redcoat	95.6 B	89.2 D	89.2 D	73.52 *	10.53 *	56.0	50.73 q
3750 L-30	FL 302	105.5 A	94.2 C	94.2 C	76.56	8.87	55.6	54.40
3751 L-31	Susquehanna	102.5 A	95.6 B	95.6 B	75.65	9.53	55.1	54.95
3752 L-32	2545	95.4 B	95.3 B	95.3 B	73.46 *	9.00	55.8	55.67
3753 L-33	2548	95.2 B	89.7 D	89.7 D	73.40 *	9.57	57.5 *	53.32 *
3754 L-34	Pennmore	110.0 A	99.0 B	99.0 B	80.16	10.52 *	56.3	59.53
3755 L-35	Dynasty	100.0 A	100.0 A	100.0 A	74.87	9.48	54.2	57.39
3756 L-36	2510	104.9 A	90.3 C	90.3 C	76.40	9.36	56.1	51.84 *
3757 L-37	Hoffman Brand 28	105.8 A	88.4 D	88.4 D	76.66	9.13	56.0	50.04 q
3758 L-38	Hoffman Brand 45	104.2 A	84.7 E	84.7 E	76.18	10.47 *	56.3	47.28 q
3759 L-39	Tyler	100.0 A	95.7 B	95.7 B	74.88	8.01	56.0	56.25
3760 L-40	Hoffman Brand 89	107.5 A	79.9 F	79.9 F	77.19	9.44	57.5 *	44.86 q
3761 L-41	Freedom	98.9 B	91.5 C	91.5 C	74.54	8.85	55.4	51.81 *
3762 L-42	Madison	103.9 A	95.1 B	95.1 B	76.07	9.56	53.9	52.78 *
3763 L-43	Wakefield	100.0 A	94.8 C	94.8 C	74.87	10.02	54.5	53.32 *
3764 L-44	Excel	98.0 B	100.6 A	98.0 B	74.25	10.16	53.5	56.88
3765 L-45	PA8465-32	97.5 B	88.6 D	88.6 D	74.11	9.89	57.4 *	52.26 *
3766 L-46	SR 87	97.0 B	91.2 C	91.2 C	73.95 *	10.28	55.9	52.33 *
3767 L-47	W109	106.7 A	80.4 E	80.4 E	76.95	10.73 *	57.0 *	44.58 q
3768 L-48	Twain	93.4 C	83.7 E	83.7 E	72.82 q	10.70 *	56.5	46.69 q
3769 L-49	Lincoln	100.1 A	96.6 B	96.6 B	74.92	9.38	54.7	55.16
3770 L-50	Sawyer	98.3 B	98.0 B	98.0 B	74.34	8.92	53.6	54.77

Exhibit E**Statement of Basis of Applicants Ownership**

Pennmore soft red winter wheat was developed at The Pennsylvania State University by Dr. Marvin L. Risius. By agreement, The Pennsylvania Agricultural Experiment Station seeks Plant Variety Protection for the variety, Pennmore.